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TESTS WHICH PROVOKE INTEREST

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Can testing be made a pleasant experience and at the same time dip keenly into ascertaining outcomes? Can this necessary exercise be made less of an ordeal without sacrificing any of the desired effects? In the press of everyday duties, we often teach better than we test because of the difficulty of testing for the complex outcomes involved in the ability to do sound geographic reasoning, and in the power to apply geographic findings correctly in dealing with concrete situations. To test for these attainments which are the goals of the kind of geographic instruction which is far reaching in its effect upon better citizenship in an intriguing manner is a real challenge to teachers of geography.

To build tests which will approach this ideal, one should first inject as much variety and novelty into the format itself, should next seek to make a minimum amount of written expression on the part of the pupil reveal a great deal of his insight, thereby avoiding fatigue and facilitating a larger sampling area and third, should above all make the inquiries genuinely purposeful by hooking them up to events and problems which occur in real life. Never has there been a time like this when global war activities and post-war planning make the possibility for such correlation so rich.

If available and practicable, the use of charts, maps, diagrams, sketches and especially pictures help immeasurably in putting together tests which are attractive and intriguing, but it is possible to achieve good results without them.

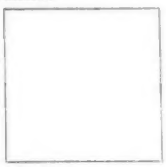
The following sample questions which have been found useful for Commercial Geography Classes at the tenth year level, are illustrative of what can be done to make tests revealing and at the same time help to dispel "grading-time gloom."

SAMPLE TEST QUESTIONS IN ECONOMIC GEOGRAPHY

I. Density of Population

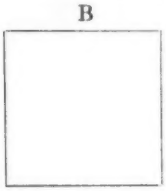
You learned early that the population of the earth is very unevenly distributed.

People live closest together where opportunities for many people to make a living are best and farthest apart where there are fewest opportunities. In cities chances for getting jobs are most numerous so cities are spots of "super-density" as you found out when you computed the number of people that live in the Schurz square mile.



A

B



C

1. A is the square mile we surveyed near our school. Put in the names of the streets which form its border. Why would it be impracticable to put in as many small dots as you would need to show the number of houses in this square mile? _____

2. B is a square mile in Iowa. Compute the average density of Iowa: population 2,500,000; area 56,000 square miles. Put in as many dots (each to represent one *house*) as you would see as you flew over the square mile in an airplane.
(One house averages four people.)

3. C is a square mile in Arizona. Compute the average density: population 436,000; area 114,000 square miles. Put in as many dots (each to represent one *house*) as you would see as you flew over this square mile.

4. Insert A or B or C in each blank.
Important occupation(s) in places like
_____are likely to be manufacturing and trade
_____is likely to be farming
_____are likely to be grazing or mining or forestry

II. Two Problems in Sun Behavior

A. We read that rubber gathering in a Sumatra plantation, which is near the equator, begins shortly before daybreak, let us say about an hour. Check the time you think a rubber gatherer would start his work on these three dates. One is checked for you.

	March 21		June 21		Dec. 22
√	5:00 A.M.		2:30 A.M.		4:30 A.M.
	3:30 A.M.		5:30 A.M.		6:00 A.M.
	7:00 A.M.		5:00 A.M.		4:00 A.M.
	6:30 A.M.		7:30 A.M.		8:30 A.M.
	8:00 A.M.		9:00 A.M.		5:00 A.M.

B. Here are three "Black-Out" time lists lettered A-B-C, which appeared last August, 1942 on the front page of the *Bulletin and Scots Pictorial*.

BLACK-OUT TIMES

A.

	P.M.	*A.M.*
Glasgow	11:10	5:36
Edinburgh	11:06	5:31
Dundee	11:08	5:28
Aberdeen	11:07	5:21
Dumfries	11:05	5:36

B.

	P.M.	*A.M.*
Glasgow	11:12	5:34
Edinburgh	11:08	5:29
Dundee	11:10	5:26
Aberdeen	11:10	5:19
Dumfries	11:07	5:34

C.

	P.M.	*A.M.*
Glasgow	11:14	5:32
Edinburgh	11:11	5:27
Dundee	11:13	5:24
Aberdeen	11:12	5:17
Dumfries	11:09	5:32

a. Which one appeared on August 6?_____
Which one appeared on August 7?_____
Which one appeared on August 8?_____
What helped you decide?_____

b. Would you have to pull down your black shades earlier or later here in Chicago than they do in these Scottish cities? _____

III. Two British Puzzles

Sometimes it is fun to solve a puzzle. These two were composed by a member of your class.

1. A passenger port in South England:
   The opposite direction of north + the upper hind quarter of a pig's leg + p + 2000 pounds.[1]
2. A tin-plating city in South Wales:
   Begins with an S. A graceful bird + a big body of water.[2]

IV. Our German Enemies

1. The more one knows about one's opponent, the better he is able to deal with him successfully. How much do you know about Germany?
   Following are statements which supply information in part. You supply the rest by:
   Marking (1) that completion statement which gives the *best* reason.
   Marking (2) a completion statement which gives *another* good reason.*

[1] Ans. (Southampton)
[2] Ans. (Swansea)
* The form for the first part of this exercise was suggested by "Tests"—Europe and Asia. Chicago: Silver Burdett and Company.

a. Corn is not a common crop in Germany because:
_____the growing reason is too short.
_____hogs thrive better on root crops.
_____the soils are not as rich as in our Corn Belt.
_____people do not like corn dishes.

b. Rye bread is eaten more commonly than white bread because:
_____rye does well in the cloudy areas of poor thin soil of northern Germany.
_____only a small area in Germany is suited to wheat.
_____the German people prefer rye bread.
_____the German people do not care so much for pastries.

c. The Ruhr Valley Iron and Steel Business is one of the largest in the world because:
_____it is close to many industrial cities.
_____the Germans are good technical men.
_____it is situated on the rich Westphalia coal deposits.
_____it is easily accessible to the ocean by river and canal.
_____it has been bombed frequently by the United Nations.

d. The great chemical industry developed in the Elbe-Saxony district because:
_____of excellent rail transportation.
_____the people there are highly skilled.
_____the largest known world deposit of potash is found there.
_____the Elbe River affords cheap, easy moving of bulky materials.
_____of the large lignite coal deposits used for power.

e. The uplands of southern Germany contribute their share to the nation's economy by:
_____providing sturdy warriors.
_____making many kinds of saleable handwork.
_____catering to tourists.
_____buying many of the commodities manufactured in the northern cities.

f. Germany's rapid industrial expansion came about partly because of:
_____the patience of its people in learning new arts.
_____the numerous excellent technical schools.
_____the existence of vital raw materials such as coal, potash, salt, etc.
_____the use of fertilizer to improve the poor soils.

g. River and canal improvements and traffic are important partly because:
_____four good sized rivers traverse the country from uplands to the sea to the north.
_____there is no petroleum oil found in Germany so gasoline for trucks is very expensive.
_____canal building is easy in the northern plain.
_____distances are relatively short.

h. Germany's naval power has never been as great as Britain's partly because:
_____the Germans are not good sailors.
_____they got a late start. Germany as a nation is only seventy years old.
_____they have only a short coast line.
_____they are a home loving people.

2. Strike out the commodity(ies) which you think does (do) not belong in this statement:

At Duisberg, a busy Rhine River port at the junction of the Ruhr, one sees hundreds of barges moving downstream towards the ocean loaded with coal, coke, bales of cotton cloth, big packing cases of dyes, medicines, perfumes, dolls, cuckoo clocks, raw silk and corn syrup.

V. Iron and Steel in the News

If you are alert you will often notice bits of news in the daily papers which deal directly with the subjects of your school geography. The following news item was brought in a few days ago by a member of your class.

"Great Lakes Ore Cargoes in May Set All-Time High"

"Washington, June 3. (U.P.) Defense Transportation Chief Ralph Budd reported yesterday that the Great Lakes cargo fleet transported 11,081,199 long tons of iron ore in May, the greatest total in history."

1. Complete these sentences with a phrase of your own composition:
   a. The outstanding explanation for this all-time high in iron ore transportation thru the Great Lakes is _____
   b. A sudden sharp drop may come at any time in the event that _____
2. Check three reasons which best help to explain the increased ore demand.
   _____entry of the United States into World War II.
   _____increased production of farm machinery to produce more crops.
   _____increased employment.
   _____increased incomes.
   _____lend-lease of armaments to the United Nations.
   _____increased production of war materials.
   _____increased use of steel in construction work.
3. Check the reason(s) for the fact that next September is likely to see even a greater total than this May high.
   _____ore is then brought in anticipation of winter needs.
   _____rush to get supplies in before the lakes freeze.
   _____mine output is greater in later summer.
   _____wheat cargo vessels crowd the locks.
   _____cooler days bring added energy to workers
4. Fill in the blanks with the appropriate words:
   This increased traffic of ore boats passing thru the Great Lakes, added to the usual seasonal harvest rush of _____ boats, is likely to cause serious congestion at the S_____ canals.
5. Which of the following concerned people look upon this news with hope of victory or profit? Mark those (H). Which do you think look upon it with anxiety? Mark those (A).
   _____Stockholders in the Great Lakes Transportation Co.
   _____Stockholders in the United States Steel Corporation.
   _____Members of the St. Lawrence, Great Lakes Waterway Commission.
   _____Emperor Hirohito.
   _____Winston Churchill.
   _____Adolf Hitler.
   _____Exiled Queen of the Netherlands.
   _____Members of the Miners Union—Hibbing Local.

VI. Latitude, Longitude and the War

Fliers in the United States Air Corps and sailors in the United States Navy must know their directions on the globe. Knowing distances and directions also helps you to see the realities behind the news reports. How many of the following blanks can you fill in correctly?

1. Tokyo is at latitude 35°N and longitude 140°E. Suppose Major General Doolittle and his bombing squad had taken off from a base in the northern Philippines

at latitude 15°N and 120°E. He would have flown in a general _____ly direction.

2. Pearl Harbor is 20°N and 155°W.
   San Francisco is 38°N and 122°W.

   United States naval reinforcements leaving San Francisco for Pearl Harbor would sail in a general _____ly direction.

3. London is about 52°N and 0°.
   Berlin is about 52°N and 13°E.

   Luftwaffe from Berlin fly almost directly _____ when they bomb London.

4. If you remember that a degree of latitude is approximately 70 miles, it will help you with this last exercise.

   If Axis aerial bombers, released after the fall of Kiev (50°N-30°E) had been sent to bomb Cairo (30°N-30°E)
   (a) How far would they have flown?_____
   (b) In what direction would they have flown? _____
   (c) If one plane had been forced down at Odessa (45°N-30°E) because of engine trouble, how far would it have already flown? _____

CONCLUSION

Each of the foregoing test exercises attempts to apply a specific geographic fact, generalization or skill to a real life situation or current problem in such a way as to make for lively interest. The ability to visualize population density is basic to an understanding of various types of land use and trade patterns. The first exercise tests for that ability. To actually put to practical use the principle of sun movement is the object of the sun problems. Will students remember that nights and days at the equator all the year around are twelve hours each, and that the sun always rises at six o'clock? A working knowledge of the world grid system too is a skill necessary to intelligent understanding of peacetime as well as wartime events. Have the students mastered this skill? The last question probes for that. Constructing tests such as these, which are varied and which are appropriate to one's own class needs, is a stimulating experience for the teacher. Answering them should be an equally intriguing one for the students.

MAP READING

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LESSON IV. SCALE

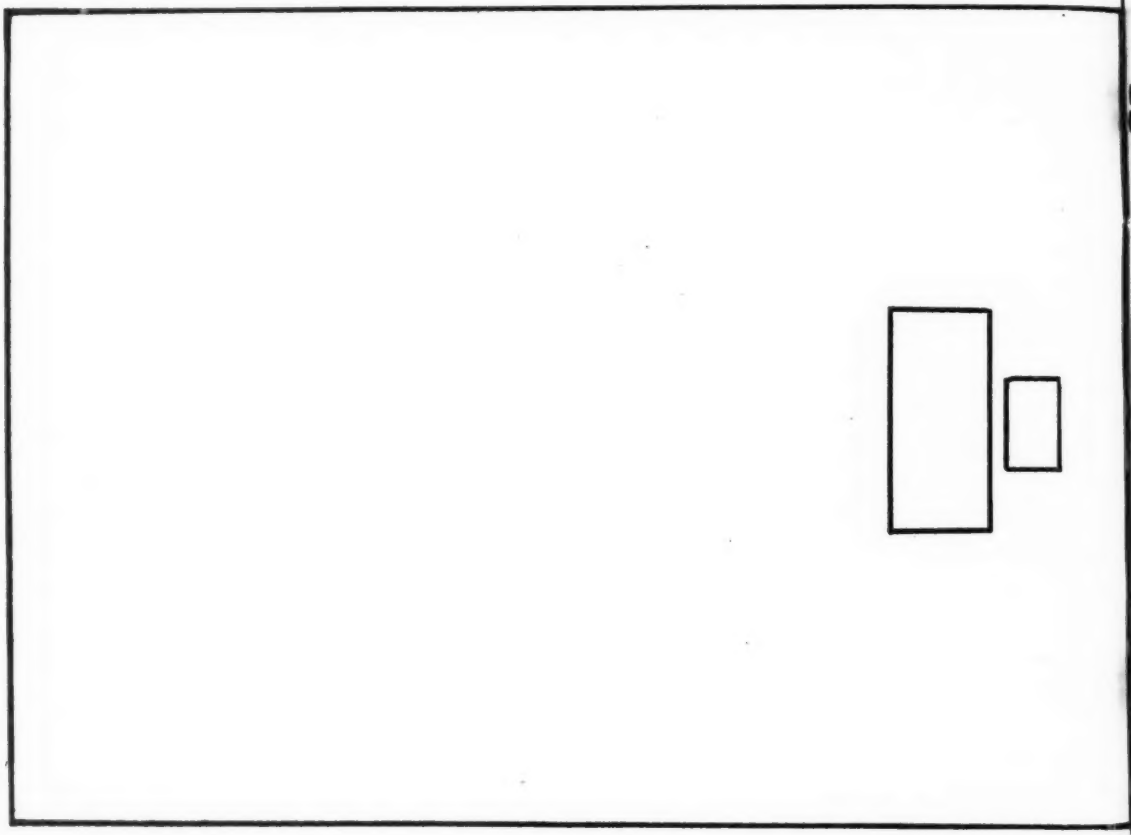
A map is a representation of the surface of the earth. It is somewhat different from most of the pictures we usually see. If someone shows you a snapshot of a friend of yours, you may say, "That looks exactly like Jane." It doesn't, really, because the picture is much smaller than Jane. Then next you may see a snapshot like this and you say, "That's Joe—doesn't he look cute in

his new suit!" It doesn't bother you that the snapshot of Jane shows just her head (about twelve inches), and the picture of Joe, on the same size paper, shows all six feet of height. You have become accustomed to such pictures. Then you may see in the Sunday paper a snapshot of trees on a snowy morning. The trees may be forty feet tall, but you have seen so many trees that the small size of the picture doesn't confuse you.

A map is a somewhat different kind of picture. It is often thousands and millions of times smaller than the earth it represents. You can realize this if you think of it this way. It would take a piece of paper 25,000 *miles* long to draw the equator life size.

The best way to understand the size of the earth is to travel over it. If you have ever driven to California, those few inches across the map of the United States begin to mean a lot to you. Travel by air is even better than driving, for in the air you get a picture of the country unrolling beneath you. However, even before we have a chance to travel much we can begin to get some idea of the size and shape and distances of the earth thru reading maps.

Every map has some definite proportion to the earth it represents. Perhaps if we start with something we can see, we can get the idea more easily. Let's make a map of a school room which is twenty feet wide and thirty feet long. We know that we can't make it life size, so we decide to let one inch on the map represent five feet of our room. How long will our map be? How wide? It will be six inches long and four inches wide. And it will look like this:



We have to have some way to tell other people how big this room is, because you can't tell by just looking at it. The easiest way would be to write under the map: 1 inch to 5 feet. Then anybody with a ruler can measure the length. He will find the room is six inches long. Then he can multiply 6×5 and he knows that the room is 30 feet long.

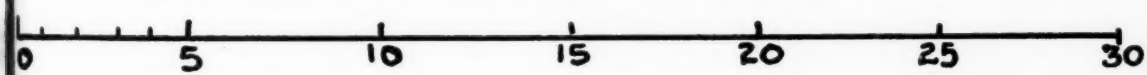
When we write 1 inch to 5 feet we have given the *scale* of the map. Scale is simply the relation of the size of the map to the size of what it shows. We could also give the scale of this map in inches. Five feet is equal to sixty inches, so we could just as well say: 1 inch to 60 inches, or 1:60, or 1/60.

Now you have four ways of writing the same thing. All you want to tell people is that our map represents a room 30 feet by 20 feet, and you can say in these ways: 1 inch to 5 feet, or 1 inch to 60 inches, or 1:60, or 1/60.

Suppose you want to *draw* a scale that people could use instead of a ruler. You can draw a line like this:

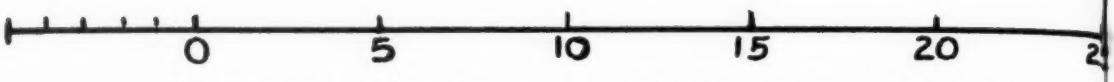
Then you can mark off the inches and put down what they mean. One inch represents 5 feet and so on.

This is called a *graphic* scale because it is drawn out for people to see. It is the kind of scale you find most often on the maps you have. You are probably well acquainted with the use of this scale. But this scale can be made much better by changing one thing. There is a desk in this room. Find it on the map. The question is, how large is the desk. Take a piece of paper. Measure the length of the desk ———— on your paper; then measure and mark the width of the desk ———. Lay these measurements against the graphic scale. You find that both the length and width of the desk are less than five feet. But how much less? You can probably make a pretty good estimate, but you can't be sure. For this reason we sometimes make our scales like this:



Now when you lay your paper on this scale you can say, "The desk is 4 feet long and 2½ feet wide. This *graduated* scale is often used because it helps people to measure more accurately.

There are graduated scales that look like this:



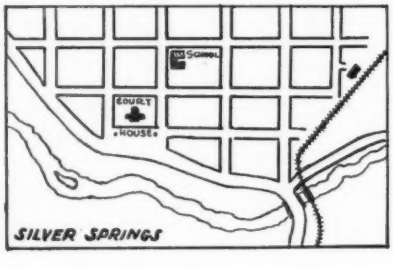
Don't get mixed up when you see this. The regular scale starts with zero. The extension, or part sticking out at the left, is used for measuring less than five feet.

We've spent several minutes now on one simple map, but if you understand these first simple ideas you won't have much trouble with the rest of this. Suppose now you want to draw a square city block. The block is 600 feet long and 400 feet wide. Can you draw such a map on your note-book paper using the scale 1 inch to 5 feet? If you figure it out you'll find that this paper is too small. But you can use the scale 1 inch to 100 feet, can't you?

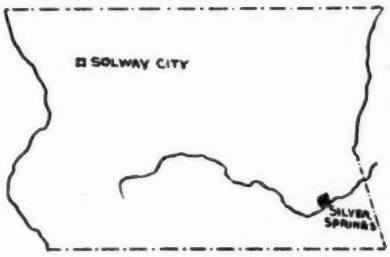
Take a minute and draw a map of this city block on a piece of scratch paper. Then write out your scale of 1 inch to 100 feet, or 1:?, or 1/?. Then draw a graphic and graduated scale. If you have any problems your teacher will help you.

We could go on all day making maps on this size of paper. We could draw a map of the city, the county, the state, the United States, and the world. Each time we would be putting more area on the map. Each time one inch would represent more inches on the earth. In our map of the room 1 inch represented 60 inches, or 1/60. In our map of the city block, 1 inch represented 1200 inches, or 1/1200. Now just for fun let's do a little problem to see what one inch represents on a world map. That is, one inch represents *how many inches* on the earth? This particular world map says 1 inch to 500 miles. What is the fractional scale 1/??? Remember that this means 1 inch represents 500 miles *in inches*. Whoever is best in arithmetic should get it first.

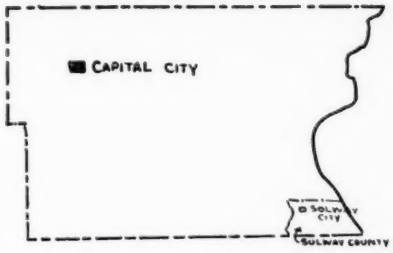
People are always talking about *large scale* and *small scale* maps. Here is a map showing the imaginary City of Silver Springs.



The scale is 1/31,680 or 1 inch to ½ mile. You can see clearly the river, the streets, the main roads and so on. On a map of Solway County you can still see where Silver Springs is located. The scale here is 1 inch to 20 miles or 1/1,267,200.



Solway County



State of Blank

On a map of the state you can hardly see Silver Springs, because it is, after all, a small town, and there are many more important places. The scale here is 1 inch to 100 miles, or 1/6,336,000.

Now do you think you could find Silver Springs on a world map with a scale of 1 inch to 500 miles? Probably not. You would even have trouble finding the state on a world map.

What people mean by a large scale map is one on which most of the details, or small things, are shown. A large scale map shows streets, roads, small rivers, sometimes even buildings. It shows only part of one degree of latitude or longitude. Ask your teacher to show you the large scale maps of the United States Geological Survey.

A medium scale map shows some of the more important details. It may cover several degrees of latitude and longitude. You have to decide for yourself when a map is medium scale.

A small scale map does not show much detail; in fact it often does not even show all the important things. A map of the world on a piece of paper this size is very small scale. After all if this length ———— on a map has to represent 500 miles, a great deal has to be left out.

It is a good idea to use your globe to find distances on the earth. On the globe all distances are correct or true. You can consult this table to find the scale of your globe:

On an 8 inch globe 1 inch represents 1000 miles.

On a 16 inch globe 1 inch represents 500 miles.

On a 20 inch globe 1 inch represents 400 miles.

Here is an important fact to remember in reading maps. Scales cannot always be used all over a map. This is especially true of small-scale maps and world maps. World maps are usually so much out of shape that a scale cannot be used on them.

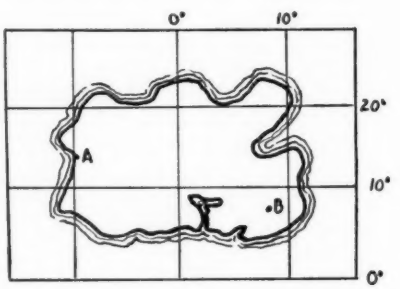
On some of your maps there is a scale which looks like this: ⟿

Equatorial Scale of Miles

100 MI. 200 MI.

What does it mean? That this scale can be used *only* at or near the equator. The rest of the map is so out of shape that the scale will not work. Be careful, then, and use the scale only as it was intended to be used.

Most world maps do not have a scale given. If you want to be able to make a *rough* estimate of distances you can do this. Take a ruler and mark off one inch along the prime meridian. Find out how many degrees of latitude there are in that inch. Multiply the number of degrees of latitude by 70 and you know *about* how many miles there are to the inch.



Try it on this map:

Approximately how far apart are A and B?

Can you make a graphic scale?

What is the fractional scale 1/??

This kind of rough estimate is useful where you have only one map. If you have a globe or a larger scale map you should use them, of course, in order to be accurate.

Things to remember:

1. A map is thousands or millions of times smaller than the earth it represents.

2. There are several ways of showing a scale, or the relationship between the size of the map and the size of the earth it represents.

3. A fractional scale 1/63,360 means that 1 inch on the map represents 63,360 inches on the earth.

4. An inch to mile scale, 1 inch to 500 miles, means that one inch on the map represents 500 miles on the earth.

5. A graphic scale shows you a line marked off to show distance on the earth.

6. Scales cannot always be used all over a map, especially a world map.

0 5 feet 10 feet

7. When no scale is given, degrees of latitude can be measured along a straight meridian to get an idea of the approximate scale of a map.

PRE-WAR TRUCK MOVEMENT OF COAL FROM ILLINOIS MINES

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In a booklet prepared by the Northern Illinois Coal Trade Association titled, "History of Coal Production and Disposition, State of Illinois," it was shown that in 1900, Illinois had a total coal production from local mines (usually called truck mines by the layman) of over 1,000,000 tons. It is evident from this report that as far back as that time, coal hauling over Illinois roads was an important business.

REASONS FOR LOW COAL PRODUCTION

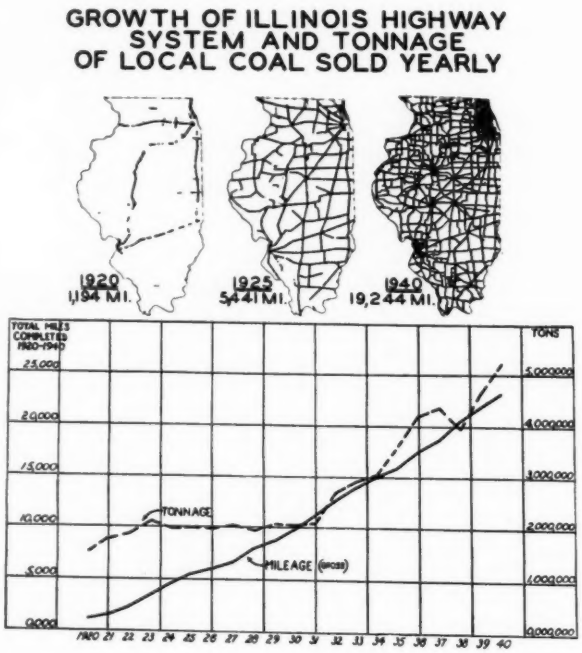
In those early days roads were bad and the distances that coal could be hauled were limited, so local coal mine sales were strictly confined to a small area around the mines. This for the most part was the distance that a team of horses pulling a dray or farm wagon could cover to go to the mine and back in one day. This distance, of course, depended primarily upon road conditions.

A second factor which kept truck coal mine production low was the fact that the general quality of the coal produced at that time was poor. Many of the truck mines were just "holes in a hill" and produced coal that had been more or less exposed to weathering elements, and as a result had partially deteriorated. Operators of truck mines that were deep enough to produce a coal of a higher quality neglected to carefully clean their product so as to keep the delivered price low, and therefore truck mine coal as it was then delivered was inferior to railroad moved coal. Many persons at the present time think that these same conditions still exist, however this is not usually true.

Two elements, then, caused truck coal mine production to be low and remain low for many years: (1) the element of limited transportation; and (2) the fact that people came to assume that coal moved from the mine by wagon or truck was of poor quality.

With the increased use of trucks, these conditions changed very slowly. Most of the roads were bad, the cost of operation and upkeep of the trucks was extremely high, and in the winter when the most coal was needed, trucks were of no more use than wagons since muddy and snow covered roads prevented travel. Even with

these conditions in mind, J. W. Bristow wrote, "One fact overlooked by producers, retail dealers, and rail carriers alike was that a new transportation era had dawned. . . ."[1] Truck coal hauling remained limited until the private motorist began to demand roads that were usable all year around. City road improvements were followed by county main roads and then district roads until finally the demand came from the people for the state and national government to take over the work of constructing all-weather roads.



Improvement of Roads. No record is available to show the mileage of hard roads built in Illinois before 1914, altho city mileage must have been considerable. In 1914 Illinois had 53 miles of paved county roads. In 1917 the state was authorized to borrow $60,000,000 to be used in building concrete highways. From that time on, road building increased rapidly, and each year between 1930 and 1940 has seen the construction of over 1,000 miles of hard roads in Illinois. The total gross mileage in Illinois in 1940 was 23,361.[2] (See map.)

By 1925 considerable road building progress had been made, and all cities of importance were connected by all-weather roads. Even as late as this date the truck coal mines had not been greatly benefited because most of them were several miles from a hard road, and a few miles of unimproved road made as effective a barrier to trucks as the lack of a bridge over a river.

[1] Some Facts About Local Trade Coal Sales in Illinois. Unpublished Manuscript. Illinois Coal Strippers Association, Chicago. (No date)

[2] Personal communication, C. M. Hathaway, Engineer of Construction, Division of Highways, Springfield, Illinois.

Until 1930 the road building program in Illinois was one of connecting only the most important cities and of co-operating with the National Government in its early attempts to build national highways. These facts are shown on the map where it will be noted that in 1921 Illinois had hard roads only around Chicago—from Chicago west on what was then known as the Lincoln Highway (now U. S. 30), and from Chicago indirectly to St. Louis by way of LaSalle and Springfield and by way of Danville and Effingham.

Along with the expansion of highways came the question of cost of operation of the trucks. Bigger, faster, and more dependable trucks were developed thru the years at an operating cost that kept steadily decreasing. The adaptability of trucks to hauls of any tonnage and of any length has finally made it possible to move Illinois coal to every important trade area within the state. After 1930 the Illinois road building plan became one of connecting smaller cities and villages with all-weather roads and of joining adjacent cement highways to eliminate unnecessary driving.

FACTORS THAT INCREASED COAL PRODUCTION

The rapid expansion of truck mine coal production from 1932 thru 1940 was dependent upon four factors:

1. By 1932 the hard roads of Illinois had connected all of the important cities. In some cases where the truck mine was only a short distance from the highway the mine owners had built their own hard road to encourage truckers to turn in for coal. At other places the owners erected a tipple on the highway and hauled coal from the mine to the tipple where it was cleaned and offered for sale to passing truckers.

2. The last depression was another important factor in increasing truck coal mine production. Many men were out of steady work, whether it was mining or work of some other type. These people started new outcrop mines or worked in old adjacent mines, and depended upon selling the coal they recovered to other local men who used their trucks to haul it to the consumers.

Truck operators were glad to pick up this type of work. In many cases it gave them a very substantial profit since the truckers solicited orders and delivered the coal, giving two profits with one effort. Likewise, coal delivered in this manner was obtained by the consumers at a lower price than they had paid previously, for transportation and handling charges were at a minimum. Repeat

sales were assured since price was an important factor to the majority of families.

During normal times farmers with trucks hauled coal during their slack-work season, and thus made use of a machine that would otherwise have been idle. At the same time they helped the coal miners sell their product at a price rate profitable to them. Many of the mines were operated only during the colder months when the farmers were less busy, and both trucks and labor were available.

A large increase in the number of miners employed in truck coal mines came between 1930 and 1933, as a result of which the production of truck mines increased rapidly. Within this three-year period 3,000 additional miners were employed in mines of this type. (See Table 1.)

TABLE 1
MEN WORKING IN TRUCK MINES IN ILLINOIS*

Year	Number
1929	3,875
1930	4,796
1931	6,526
1932	7,476
1933	7,804
1934	8,556
1935	8,604
1936	9,131

* *Coal Reports of Illinois*, 1929–1936.

3. As the use of trucks increased for long hauls, the necessity of having a paying load in both directions became apparent. One of the leading factors that has kept Chicago largely out of the truck coal market was that the commercial trucks going to Chicago were already filled since much more truck tonnage is moved to that city than from it. Carrying a load in both directions works out perfectly, however, in many cases. One of the sources of income for the Three Counties Coal Corporation, Augusta, is from Iowa truckers that return home from Chicago and Peoria with a load of coal obtained at this mine. In some cases the coal is carried as much as 300 miles.[3]

4. Another important factor, but one that is impossible to estimate as far as tonnage is concerned, is that the public, looking for cheaper coal during the depression, was more willing to listen to

[3] Personal communication, W. C. Swallow, Jr., Manager Three Counties Coal Corporation, Augusta, Illinois.

the local truck coal mine dealer when he explained that the coal from the better truck mines was of as good a quality as that obtained from the shipping mines (mines shipping part or all of their output by railroad).

The preceding four factors have accounted for a truck coal increase of 3,000,000 tons from 1931 thru 1940. In 1940, 10.1 per cent of the Illinois production was from truck mines. Most of the increased production was sold to the larger cities in Illinois (excluding Chicago) and to cities adjacent to Illinois, chiefly to the west.

RESULTS OF INCREASED TRUCK COAL MOVEMENT

Minimum prices for coal moved by trucks were put into effect in 1940 by the Bituminous Coal Division. In general this price is 50 cents per ton more at the mine than for railroad moved coal from the same mine or area. This added cost to truck-hauled coal has tended to lessen the price difference in the truck and rail-hauled fuel and to partially retard truck coal movements. The St. Louis smoke ordinance which eliminated most of the Illinois coal formerly sold there has been an important factor in reducing the amount of coal trucked to that city, and so has adversely affected the total production from adjacent truck coal mines. However, with better coal preparation, an increase in the sale of Illinois coal in St. Louis resulted, but it is still less than before the smoke ordinance was made effective.

At first the coal dealers and railroad companies ignored truck coal mine production and sales, but when it began to increase rapidly following 1931, retail coal dealers not using truck coal began to lose business because of the lower cost of truck-moved coal. These coal dealers started to exert their influence to force the coal companies that moved their product by rail to agree to discontinue the sale of coal to local truck markets. On the other hand, the mine operators that used the railroads were interested in preserving the local markets and have in many cases even installed better equipment to rapidly handle the local truck trade. The Little John Mine in Fulton County, a shipping mine, sends some of its coal to Galesburg 15 miles away where it is hoisted into bins constructed especially to serve the trucks operating on the adjacent thru highways.

Coal trucking has been handled in many ways so the following headings represent only a few basic methods.

1. Farmers use their trucks as mentioned previously.

2. Commercial truckers who use equipment that will hold coal, unload their original load in the large cities and take back five or ten tons of coal from some mine located on the highway. A stock truck driver delivering stock at Peoria may stop at a truck mine on his way back and pick up coal, which is loaded onto the truck by chute, and delivered to the consumer that day. The reverse plan is worked in the winter when a trucker from southern Illinois takes a load of coal to Bloomington and returns with a load of corn. This method has also been mentioned previously.

3. Truck operators bring mine equipment, such as timbers and machinery to the mine and take a load of coal back home. This coal is usually ordered by a consumer before the trucker leaves his own community.

4. Individuals may buy coal at the mine and make their own arrangements to have it delivered.

5. Retail coal companies send their trucks to local truck mines for coal during a time when the trucks would otherwise be idle.

6. If their own trucks are not available, retail coal dealers may sign a contract with trucking companies to haul coal.

7. An owner of a truck may decide to be a coal dealer and use his truck to haul coal from mines at which he has been able to make an exceptionally favorable deal.

8. A mine operator may sell coal at a delivered price and contract with certain companies to move all coal sold in that manner. The W. G. Sutton mine at Minonk, uses this plan to dispose of its locally sold coal. This arrangement does not exclude other coal truckers from buying coal at the mine.

9. In some areas automobile trailers move coal. These trailers have a capacity upwards of several tons. By using this plan a whole neighborhood may be able to obtain coal at mine prices.

With the winning of the war, and the resumption of the Illinois road building program, one may expect an increasing number of truck mines to improve the quality of their coal by cleaning and sizing their product. This in turn will lead to more trucks being used to haul the more valuable coal. Likewise with the increased capacity of each truck and the decreased cost of operation, Illinois coal will reach consumers by way of highways at a distance far in excess of that now covered. We are now just around the corner from a period when enormous tonnages of coal will be moved by truck to the consumer.

EAST COAST DISTRICT OF AUSTRALIA

ANNE M. GOEBEL
State Teachers College, Emporia, Kansas

Visitors to Australia are enticed to take a trip to the north of Sydney thru hearing over and over again interesting names such as Kuring-gai-Chase. Kuring-gai-Chase is a national reserve of 30,000 acres directly south of the Hawkesbury River. This river is crossed by a seven-span bridge that is supposed to be the longest in the southern hemisphere. The need for such a bridge was felt for many years, since the river interfered with traffic between Sydney and Newcastle. When traveling on the Northern Railway Line, passengers were obliged to leave the train at the river and be ferried across to the other side, where another train awaited them. This led to loss of time, and was troublesome, especially in wet weather.

Hawkesbury Bridge was opened for traffic in 1889. Unfortunately, since it is only one hundred sixty-two feet above the surface of the water, it is a hindrance to large ocean-going ships and interferes with the future development of the river.

LAKE MACQUARIE

North of the Hawkesbury surprises come at every turn. Lake Macquarie, the Killarney of Australia, is a special attraction. It is described in pamphlets from the Tourists Bureaus with many superlatives. Comments are made concerning "the captivating scenery of the North," "the heritage of Australian waters," "the atmosphere gay with the trill of birds," "the scent of gum trees and the tang of the sea air," "the splash of fish and the music of the waves," and "the river flowing majestically between tree-clad hills." One author has said:

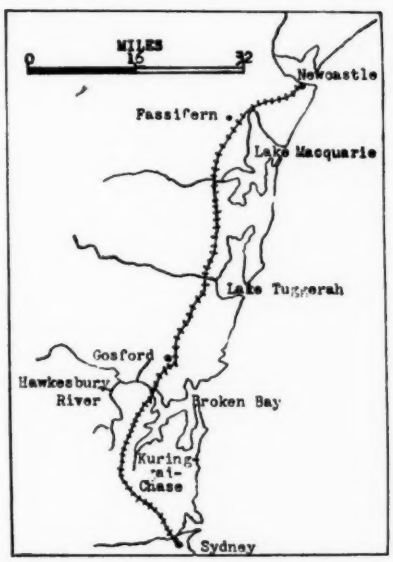


Fig. 1. Sketch map of east coast from Sydney to New Castle.

> You may travel the world over and thrill at the wonders of the American Rockies, and the Colorado Canyon; you may be inspired by the Niagara, you may revel in the beauty of

Scottish Lochs and Irish Lakes or the sparkling summit of the Swiss Alps, but nowhere will you discover such captivating scenery, such invigorating air and such perfect restfulness for relaxation all blended into one joyous whole! Such a spot makes a vacation the delight of a lifetime.

Fertile Valleys

The railway on its coastal route northward clings relatively near to the mouths of the Hunter, the Manning, the Hastings, the Macleay, the Clarence, the Richmond, and the Tweed rivers. Visitors are impressed by the beauty and the volume of these streams that flow thru productive valleys each of which may be divided into the lower, middle and upper sections. Naturally crops grown on the alluvial soils of the lower reaches are less likely to be exposed to frost than are those on the upper. This is due in part to the influence of the Pacific in moderating conditions. A climate such as that near the river mouths, warm in winter and hot in summer, is ideal for red clover, lucerne, maize, and other fodder crops. It is not surprising that dairying is carried on extensively. A large percentage of the Australian butter sent overseas is produced on the coastal area north of Sidney. Cattle graze knee-deep in lush grass near Taree. Farther north and inland along the middle and upper courses of the rivers, where the larger towns are located at the head of navigation, the raising of dairy cattle is also important. There are hundreds of dairy farms scattered about New South Wales; however it is in the North Coast District, a thickly settled section, where dairying is carried on most extensively. Along the middle courses of the rivers especially, the farms are well fenced. Except where the coal measures outcrop, there are small enclosures—cultivated paddocks—where crops are growing in the fertile soil to provide food for the winter. The grazing of cattle is becoming increasingly important on the upper hilly forested areas. The six head of cattle that Governor Philips brought with him to Australia gave a basis for the dairying industry. The introduction of cold storage, which made the world an open market for produce, and the application of cooperative marketing principles have resulted in dairy farming making rapid strides. The figures in the "Talking Points on Australia" for 1933 and 1934 show a production of 451,000,000 pounds of butter worth nearly £19,200,000. The thirty-eight million pounds of cheese produced each year is valued at £1,100,000. Even tho there are hundreds of dairy farms scattered about New South Wales those in the North Coast District are among the best.

Since each of the eastward flowing streams mentioned in the first paragraph is separated from the other by extensions from the interior dividing range, it has a valley of its own. Towns along the courses of the rivers were more or less isolated until the coastal railway was completed. Newcastle on the Hunter is known as an iron and steel, rather than as a market center. Taree is an outstanding market center on the Manning, a short stream directly north of the Hunter. Kempsey, on the Macleay, is where travelers have their first experience sleeping on beds surrounded by netting. The Clarence and the Richmond after leaving the highlands drain narrow stretches, not more than fifty miles in width. Ocean going steamers, drawing slightly more than ten feet of water, dock at Grafton. The Clarence is navigable to a greater distance than are any of the other eastward flowing rivers. Ships go upstream two hundred forty miles. Grafton on the Clarence is a town where children wind the May Pole under the jacaranda trees in November.

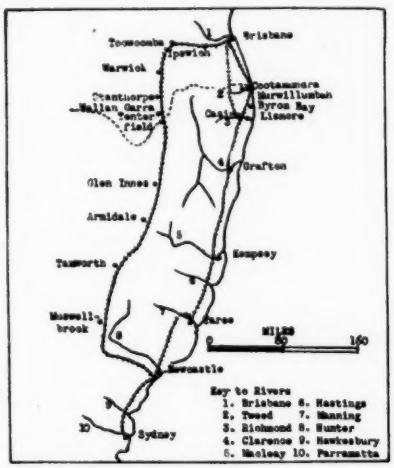


Fig. 2. Sketch map of east coast from Sydney to Brisbane.

At Casino instead of continuing directly northward to Brisbane travelers may leave the main line of the New South Wales Railway and go directly to the coast in order not to miss Tweed Heads. Near by is Byron Bay known for the largest butter factory in Australia. A half million boxes are needed annually to hold the supply. Since the factory was established in 1906, 26,000,000 pounds of butter have been made.

The terminus of the New South Wales Railway is at Murwillumbah. Many tourists spend a night there and enjoy a visit at the sugar mill along the Tweed, which is a much more sluggish stream than is anticipated. The connecting link, between the railways of New South Wales and of Queensland, is made by motor. On reaching the mouth of the Tweed, attention is called to the striking headlands of basaltic rock which resemble the Giant's Causeway. Visitors pass thru the gates into Coolangatto, tucked away in the southeast corner of Queensland. This, the most eastern part of

Queensland was named Point Danger by Captain Cook. Here there is a beautiful stretch of ocean frontage, but the loss of life due to sharks is alarming. Dangerous waters have now been charted, but an occasional loss of a life continues. The short ride by train from Coolangatto to Brisbane is thru closely settled country. One can well imagine the interest of the first settlers who were cedar gatherers.

BRISBANE

The mouth of the Brisbane River was sighted by Captain Cook in 1770. No permanent settlement was made, however until some fifty years later when a point a dozen miles upstream from Moreton Bay was chosen. The hilly land selected for the site of the city of Brisbane did not offer the best possibilities for city planning even tho the hills and valleys from the mouth of the Brisbane River to many miles above hold varied interests. The city of Brisbane, named for Sir Thomas Brisbane who later became sixth governor of Queensland, covers several square miles. Queen, the main street of the city, begins at a bend in the river near Victoria Bridge and extends to another bend near where the customs house is located. City Hall with its 300 foot tower is a dignified structure built of Queensland freestone. It faces Ann Street. The map shows that streets extending from the northeast toward the river bear feminine names, while those at right angles extending from the northwest to the other side of the river bear musculine names. The Parliament Buildings and those of the University are on Alice Street, while Anzac Memorial and Square are on Adelaide in front of the Railway Station. Most of the business houses reach from Edward to George Streets and from Adelaide to the Botanic Gardens. The palm and bamboo plants in the Gardens at Brisbane are beautiful. Red is a predominating color among the blossoms. The bougainvillea rivals the poinciana and the poinsettia—the state flower—in beauty.

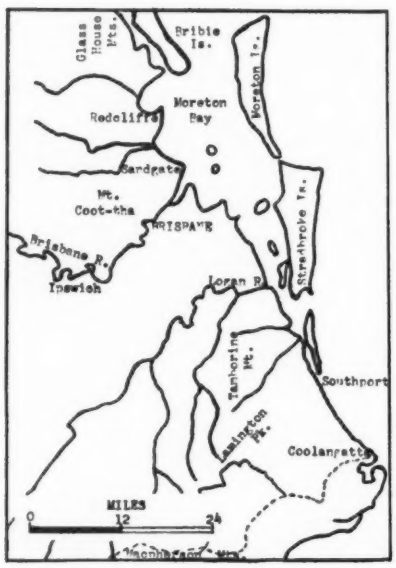


Fig. 3. Sketch map of Brisbane region.

Houses in Brisbane are often built on high, latticed, creeper-clad stilts or piles. The space underneath them gives opportunity for the circulation of air and storage room for supplies. Since many of the houses are not plastered, it is somewhat difficult to make them attractive. On November 3, 1937, the thermometer went to above a hundred degrees—the hottest day in eight years. Newspapers called attention to the fact that the city's water consumption was increased by more than 3,000,000 gallons on that particular day. The maximum temperature for November in Brisbane was recorded in 1913 when the thermometer registered slightly more than one hundred six degrees. Such weather is somewhat unusual since the highest for a given year was seventy-seven degrees and the lowest fifty-eight, a range of only nineteen degrees. The sun shines on the average of three hundred forty-two days out of the year.

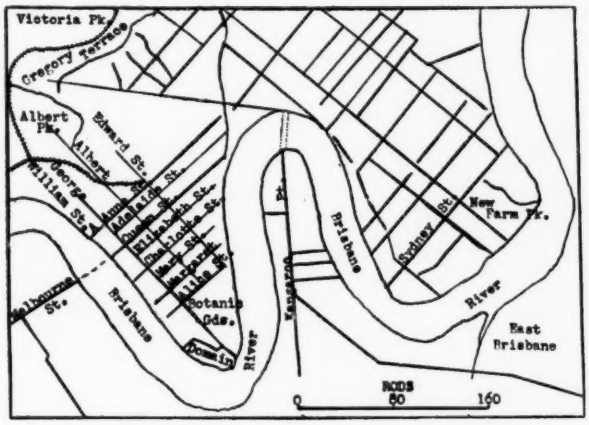


Fig. 4. Sketch map of the city of Brisbane.

The land surrounding Brisbane offers many possibilities for interesting tours. The view obtained from the 720 foot Mt. Cootha is worth while. Redcliffe and Sandgate, Southport, and other seaside resorts are seen as well as Brisbane proper. The fifteen mile trip up the Brisbane River in a steam launch to Lone Pine is restful. This launch leaves from near Victoria Bridge in Brisbane, passes under the Gray Street Bridge, then out where open country borders the river. Golf links and the site for the new university are at a sheltered bend in the river. Finally Lone Pine where visitors are permitted to fondle koala bears is reached.

The mountain resorts near Brisbane reach from the Glass House Mountains on the north to the boundary of New South Wales. Mt. Warning in the McPherson Range dominates the landscape. This 3,850 foot peak was also named by Captain Cook because of dangers along the coast. The McPherson Range divides the basins of the rivers of New South Wales from those of Queensland. The

Fig. 5. Brisbane from across the Brisbane River. Courtesy Australian National Travel Association.

highest peak in Lamington National Park reaches a few hundred feet above Mt. Warning. Drives thru this park with roadways winding in and out are most enjoyable.

People so desiring may combine land and water trips, being gone for four or five days. Sandgate and Redcliffe on Moreton Bay are popular as well-known surfing and social resorts. This part of Australia, known as the "Florida of the Continent," is easily reached both by land and by water. The beaches are equipped to meet the demands of tourists.

The largest of the ocean vessels dock at New Farm piers, where the tide rises seven feet. Considerable water-borne trade enters Brisbane, the shipping center of the state. There is weekly service with Sydney. The yards of the Brisbane Steamship Company are near the river. Certain necessary materials for food, clothing, and shelter are made nearby. One of the abattoirs is close to the mouth of the river, while asphalt and gas works are farther upstream.

The native-born population of Australia is awakening to the attractions of Brisbane in a land of continuous summer. One writer has said, "Brisbane, on the threshold of the tropics, is different from the other capital cities of Australia. It has an atmosphere of its own since the flush of the tropics is in its blood. Brisbane wears a smile on her coral lips and a flower in her hair. Since it is richly endowed with natural advantages, there are a score of seaside resorts stretching from the city to the eastward. At this point where ocean and river meet, there are miles of sandy shelving beaches equipped to meet the demands of tourists."

INTERIOR ROUTE SOUTHWARD

On the return trip from Brisbane to Sydney the west side of an elongated circle is covered. Attention is called to coal producing sections near Ipswich. The output of the abattoirs there is valued at about £3,000,000 yearly. The train stops at Toowoomba long enough for the passengers to get off for lunch. Toowoomba is the largest interior town on the divide. An opportunity is given for seeing first hand the red soil surrounding Toowoomba and the dark of the Darling Downs, one of the best wheat growing sections of Australia. Even tho much of the wheat is not sown until August, in a few sections Sunshine and Massey-Harris combines were at work in the fields in November. Warwich, also one of the larger towns on the Downs, is a railroad center. After leaving Warwich, wheat fields are more scattered.

Stanthorpe is in the center of an area covering five hundred square miles. It is at the edge of the Downs, three thousand feet above the sea. Stanthorpe is an outstanding center for the production of grapes, apples, and stone fruits. Trees planted on the virgin volcanic soil in this granite belt bear well. The land across the dividing range on the Queensland-New South Wales border is most rugged at Wallangarra and at Tenterfield.

The trip from Tenterfield southward leads thru Glen Innes. From there southward the railway is built far enough from the edge of the New England Highland to avoid the gulches. It passes not far from the 5,000 foot Ben Lomond, the highest point in the range. Certain of the older well-known squatter families live near Armidale, known for its supply of pure water. Tamworth is a progressive market town on the westward flowing Peel. Waters from this willow-lined river eventually find their way into the Darling. Fodder crops do especially well in the valley. Werris Creek is the

only railway junction reached before crossing the dividing range into Muswellbrook, where wheat is dead ripe in mid-November. Swarms of grasshoppers remind one of Kansas. Some of the finest station homes in Australia are seen before the main line of the railway is reached at Newcastle. The return to Sydney is made across the beautiful Hawkesbury River, Kuring-gai-Chase, and the valley of the Parramatta.

A COURSE IN MAP STUDY

SISTER MARY GREGORIA, B.V.M.
Mundelein College, Chicago, Illinois

In order to span the hiatus in the education of high school and college students who have had no opportunity to study geography since leaving the grades, a one or two-hour course in Map Study or Map Reading will serve a much needed purpose. The objectives of the course are to acquaint the students with the tools of geography, especially the world globe and measuring tape, atlas, encyclopedia, different map projections, various uses of maps, and to stimulate interest in the places where the allied forces are located.

The following outline of content is suggested:

I. History of Map Making
II. Use of Maps in Propaganda
III. Structure of the World Globe
IV. Map Projections
  1. Mercator
  2. Conic
  3. Polyconic
  4. Azimuthal
  5. Polar
V. Topographic Maps
VI. Aerial Photographs
VII. Geography of the War Fronts
  1. Asia
  2. Oceania
  3. Europe
  4. Africa
  5. Latin America
  6. North America

The materials suggested for such a course are:

World Globe and measuring tapes
Wall maps of different projections and continents
Basic Field Manual, War Department
Field and Stetson, *Map Reading and Navigation.* Van Nostrand, New York, 1942
Flexner and Walker, *Military and Naval Maps and Grids.* Dryden Press, New York, 1942
Encyclopedia Americana
Encyclopedia Britannica World Atlas, 1942
Periodicals

The two following projects serve as a check-up on the finesse of the students in the use of the materials suggested.

MAP PROJECT I

Suggested References:

Encyclopedia Britannica World Atlas (1942)
Rand McNally, *World Atlas*

1. Convert into hours and minutes: 110° 85° 75° 130°
   Convert the following into longitude:
   4 hrs. 23 min. 12 hrs. 16 min.
   6 hrs. 15 min. 3 hrs. 20 min.
2. Using a polar projection, connect the following places with each other by great circles. Using the globe and measuring tape note the distances between them and mark the flying time:

New York and London	New York and Tokyo
New York and Moscow	San Francisco and Cairo
New York and Berlin	San Francisco and Tokyo
Fairbanks and Chungking	San Francisco and Calcutta
Rabaul and Manila	Buenos Aires and Melbourne
	Auckland, N.Z. and Capetown

3. What is the direction of Manila from San Francisco?
   What is the bearing of Manila from San Francisco?
   What is the bearing of Chicago from Peiping?
4. By means of the globe list the places on the earth that have the same latitude as New York; New Orleans; Cape Town; Cape Horn; Chicago.
   What region of the earth is latitude 22° north, and 158° west?
   What is the difference in longitude between New York and San Francisco? Between Sidney and Seattle?
5. Trace on your polar map the journey of the Russian flyers who crossed the North Pole in 1937.
   Trace Byrd's trip to the South Pole from New Zealand in 1928-30.
6. Divide a Mercator projection into Time Zones.
   When it is 1 P.M. in Chicago, what time is it in Honolulu? In Guadalcanal?
   When it is 5 A.M. in San Francisco what time is it in Tokyo?
   When it is 5 A.M. in Honolulu what time is it in Tokyo?
   When it is 5 A.M. in Chicago what time is it in London?
   When it is 6 A.M. in Washington, D.C. what time is it in Berlin?
7. Compare your Mercator Projection with the globe and give the distortions observed. What are the advantages of a Mercator Map? Polar Map?

MAP PROJECT II

Part 1. Using a Mercator Projection work out your own war map by locating the following places where the allied forces are stationed:

Asia

Iraq
Iran
India
China
Syria
Yünnan Province
Salween River
Burma
Rangoon
Mandalay

Europe

Belfast
England
Stalingrad
Leningrad
Kotelnikow
Rostov
Don River
Volga River
Caucasus Mts.

Latin America

Guatemala
Nicaragua
Costa Rica
Canal Zone
Galapagos Islands
Venezuela
British Guiana
Surinam
Brazil
Bahama Islands
Santa Elena
Aruba
Curaçao
Trinidad
Antigua
Virgin Islands
Puerto Rico
Haiti
Jamaica
Cuba

Oceania

Johnstown Island
Hawaiian Islands
Midway Island
Wake Island
Palmyra Island
Philippine Islands
New Guinea
New Caledonia
New Zealand
Fiji Islands
Samoa Island
Canton Island
Guadalcanal
New Georgia
Australia

Africa

Casablanca
Algeria
Tunis
Bizerte
Sfax
Sousse
Freetown
Liberia
Gold Coast
Nigeria
Chad
Gabon
Belgian Congo
Anglo-Egyptian Sudan
Eritrea
Cairo
St. Lucia Cape
Tripoli
Dakar

North America

Aleutian Islands
Canada
Newfoundland
Labrador
Greenland

Part 2. On the same map mark with a cartographic symbol the following lend-lease air and naval bases:

Newfoundland	Jamaica	Antigua
Bahamas	Guantanamo	Trinidad
St. Lucia	Bermuda	Georgetown, British Guiana

Part 3. Color in yellow on the map the territory of the world under Japanese influence.

Color in blue the British sphere of influence.

Color in orange Germany's sphere of influence.

Color in red the U.S. sphere of influence.

Part 4. Analyze any 6 contour maps or aerophotographs.

EDITORIAL NOTES AND NEWS

DR. WILBUR F. MURRA, formerly executive secretary of the National Council for the Social Studies, has now joined the staff of the Civic Education Service, in which organization his work will be chiefly as editorial writer on *The Civic Leader*, which is a weekly paper for social studies teachers.

More reindeer steak may be on the civilian market in case the armed forces do not consume the supply which will be available from the slaughter of some of the overabundant herds of Alaska. Reindeer raising there was established by the United States Government in 1891 for the benefit of the native Eskimo and Indian who faced starvation and lack of clothing material due to the rapid extermination of much of their native wild life by the introduction of the rifle. Breeding stock from Siberia was introduced, and Lapp herders were brought in to teach the care of the animals. White men then began the expansion of the industry and the native found it difficult or impossible to meet this competition. A few years ago, Congress decided that the white man must sell his herds to the government, which then passed them on to the natives. More than half the reindeer are now so owned. To aid the industry, the government has set up a Reindeer Experiment Station at College, Alaska, and also operates a number of Reindeer Stations supervised by the Office of Indian Affairs. The reindeer subsist on land too poor for other livestock. They must be herded in order to protect them from predators, and they must be driven to seasonal pastures in order to conserve the scanty pasturage. This seasonal movement of herds may require an annual feeding range of about thirty acres to an animal. The tendency is to increase the size of individual herds. Many average several thousand to the herd, with dogs to assist the herder.

DR. C. LANGDON WHITE, formerly of Western Reserve University, Cleveland, is now Professor of Geography in the School of Humanities at Stanford University.

North Dakota continues to lead in the production of lignite. Total production in 1942 was about two and a half million tons, with a value of about three and a half million dollars. This production was 87 per cent of the total production of the United States. About two-thirds of the North Dakota production comes from strip pits. Each man employed usually works 8 hours a day for an average of 202 days a year, and with the mine machinery usually mines 15 tons of lignite a day. The counties in North Dakota in which the production centers are Mercer, Ward, Burke, Burleigh, Divide, and Stark.

It is perhaps none too early to begin plans for the recognition of Pan American Day which comes on April 14, and Citizenship Day on May 21. All educators have contributions to make to an understanding of what those special days mean. The contributions to this understanding made by geography are invaluable. What are you doing to enrich the meaning back of these special observances? The Office of Education, and the Pan American Union, both of Washington, D.C., are prepared to give suggestions and publications relative to these observances.

It is estimated that the twenty million Victory Gardens produced eight million tons of food. This production is not only a great deal of food, but this home production freed the transportation system from a heavy burden, and left it better able to transport the supplies needed by our armed forces.

GEOGRAPHICAL PUBLICATIONS

Robert S. Platt. **Latin America Countrysides and United Regions.** 564 pp. 297 photographs and 209 maps. McGraw-Hill Book Company, Inc., New York, 1942. $4.00

Entirely unlike a traditional textbook, this book contains exactly the kind of material for which teachers have long felt a great need. The book is one of the results of a twenty-year project in which the author carried out his own specific techniques of geographic field study, involving a traverse method of reconnaissance, in large areas combined with detailed studies of small areas typical of the larger units.

After a brief introductory chapter describing the projects, the book consists of twelve chapters. The first entitled "Latin-American Intricacy" gives a comparison of patterns of landforms, climate, natural vegetation, soils, rock structure, and population of Latin America as a whole as depicted on a series of small maps all on the same scale. The nine following chapters treat all the Latin American countries. Mexico and Brazil each have a complete chapter while the other countries are grouped. Each chapter opens with a skillful, concise characterization of the country or countries. A core region is clearly delineated and outlying areas tied into the whole. The field studies which follow these generalizations give those intimate facts of land occupance which are so necessary to give the reality one needs in understanding regions. There are ninety-four such field studies presented and seven traverses. Most of the studies are of agricultural units; but mining centers, oil fields, livestock ranches, forest products collecting centers, river trading posts are also described. Each study includes a map or maps showing details of land utilization, layout of buildings, ditches, canals, etc. as well as terrain items of significance. There are many excellent pictures which add much to the descriptions. The final two chapters "Latin-American Habitats and Economics" and "Latin-American Political Structure in the World Order" serve as a unifying ending.

The teacher who uses this book as a college text must appreciate the fact that the author does not claim that the book represents a complete study, but that the book is intended to supplement and clarify the teachers' presentations. Teachers of geography in classes below the college level will find in this book the type of material they so frequently search for in vain in trying themselves to get those intimate details one wants in order to visualize regions in preparation for teaching them.

EDNA E. EISEN

Kent State University

Vernor C. Finch and Glenn T. Trewartha. **Elements of Geography, Physical and Cultural,** 2nd Ed. 775 pages text and 24 appendices. Many illustrations and ten folded maps in cover pocket. McGraw-Hill Book Company, New York, 1942. $4.00.

This widely-used text in college geography is in its second edition. (The first was reviewed in the January, 1937, JOURNAL OF GEOGRAPHY.) The new edition, as the first, is directed to students in their first collegiate geography courses. As before, the authors purpose to analyze critically the significant elements manifest in the geographical scene.

The new edition differs from the earlier in several respects. The treatment of the field of geography is shortened. The section on map projections has been shifted from the text into the appendix. The discussion of weather elements, particularly air masses, has been revised in the light of recent developments in meteorology. Part III, The Geographic Realms, has been in part eliminated and in part incorporated with Parts I and II. Part II,

The Cultural Elements of Geography, has been much improved thru considerable expansion.

The text is in two major parts. Part I, The Physical Elements of Geography, is in four sections. The first four chapters take up the meteorological subjects, air temperatures, pressure, moisture and storms. These are treated analytically as geographic elements in their own right and not in their contribution to the formation of landscape features nor in their relationships to any human complexes. In Part I also are five chapters dealing with climatic types, two on geological processes, eight on types of landscapes and six on earth resources. The reviewer believes that the chapters on types of climate might well be lengthened considerably and thus more information on each climate given. If this would necessitate curtailment elsewhere, it might be acheived by combining some chapters on landforms and thus shortening that section.

Part II deals with landscape features resulting from man's use of the land. There are five chapters. In them are discussed many phases of population, of settlements, of agriculture, of manufacturing and of trade. This part has been expanded from two chapters, in the 1936 edition, to five. Even so, one has the impression of a vessel too small for the provender it must contain and the necessity of compression that has somewhat toughened the victuals.

Mechanically the book is quite satisfactory. The print reads easily. The figures are entirely legible tho most of them are small. The paper is thin; there are over 800 pages in all, yet the book is not cumbersome. The ten outline maps in the rear-cover pocket are carefully planned and well printed.

W. J. BERRY

Western Michigan College of Education,
Kalamazoo

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Mrs. Lichton is a commercial geography instructor in the Carl Schurz Senior High School, Chicago, Illinois; member of the curriculum committee of the National Council of Geography Teachers and has her Masters degree from the University of Chicago.

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Miss Forsyth is a member of the staff of New York State College for Teachers at Albany, New York. This is the fourth in a series of nine lessons on map reading. The lessons have been worked out under the direction of Miss Forsyth and are suitable for junior high school level. For other lessons see the JOURNAL for October and November.

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Dr. Holmes is Associate Professor of Geography, Illinois State Normal University. He spent three years as a professional oil geologist and contributed a number of articles to the *Illinois Teacher* and *Teacher Education*.

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Miss Goebel is Assistant Professor of Education, Kansas State Teachers College, at Emporia, and a frequent contributor to geographic education. She spent her sabbatical leave in Australia in 1937. At present she is serving as Senior Geographic Aide in the Army Map Service, Washington, D.C. This is the second in a series of three articles on Australia.

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Sister Gregoria is an instructor in Mundelein College, Chicago, Illinois, and a frequent contributor to educational magazines, particularly *Business Education World* and *Journal of Higher Education*.

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Authors alone are responsible for opinions and statements in the JOURNAL.

IS IT TRUE?

EXCERPT from an address delivered by Dr. John W. Studebaker, United States Commissioner of Education, at a National Conference of College and University Presidents held in Baltimore, March 3-4, 1942.

> "First, now is the time to begin really to teach the American people geography. Apart from rather backward nations, we are more illiterate geographically than any civilized nation I know. The reason is that we have never really taught geography. Now there are a few exceptions in some places, but I mean that by and large we haven't taught geography to our citizens. Young people have stopped studying geography in about the seventh or eighth grade of the common school, if they got that far, and for the most part they were taught geography up to that time in their school courses. If we can get out of that policy an intelligent understanding of the world on the part of those taught, I would like to know how to do it. So I would recommend that in some way throughout the secondary schools and in the colleges and universities a real emphasis now be laid upon acquainting the American citizens with the realities of the world through intensive courses in world geography. It is in these later years of the educational scheme that the students have achieved the maturity necessary to an understanding of this important subject."

Does your high school curriculum provide for such training in geography? Do your students have an opportunity to become acquainted with the geography of the world in which they live and with which they must deal? Do you have teachers as well trained in modern geography as in other subjects?—EDITOR

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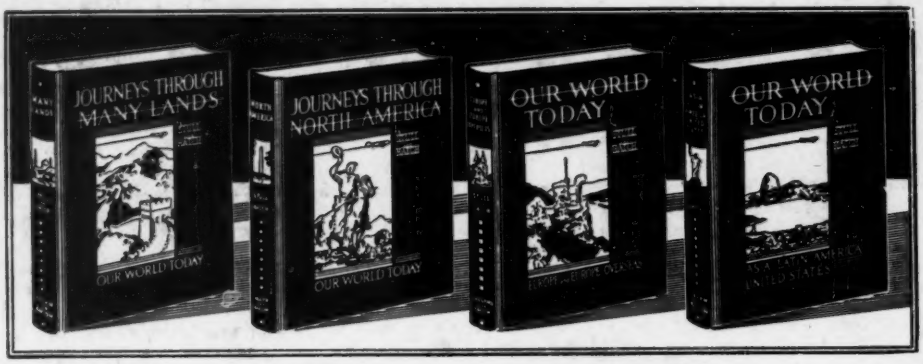

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